

such attachment without departing from the principles of the invention. For example, each attachment element 718 may have an annular notch cut at a predetermined location along its length and each aperture 720 may have a split ring spring disposed at a location along the length of the aperture 720 corresponding to the location of the annular notch of the attachment element 718, so that the split ring spring seats in the annular notch when the attachment element 718 is inserted in the aperture 720. It is also to be recognized that, although in the embodiment shown the attachment elements 718 have circular cross-sectional shapes, the attachment elements 718 may have other cross-sectional shapes without departing from the principles of the invention.

The first case 712 and second case 714 have electrical connectors 724 and the display part 706 and base part 710 have electrical connectors 726. The respective electrical connectors 724 and 726 are at corresponding locations on respective ends 704 and 708 of the hinge assembly 700 and parts 706 and 710 of the electronic device 702 so that, when the hinge assembly 700 is attached to the electronic device 702, the respective electrical connectors 724 and 726 make electrical connection. The electrical connectors 724 and 726 may be of any type well-known in the art.

The terms and expressions which have been employed in the foregoing specification are used therein as terms of description and not of limitation, and there is no intention in the use of such terms and expressions of excluding equivalents of the features shown and described or portions thereof, it being recognized that the scope of the invention is defined and limited only by the claims which follow.

I claim:

1. An interconnection assembly for a portable electronic computer, the computer having a first part and a second part, comprising:

a first linear track adapted to be connected to the first part of the computer;

a first carriage movably mounted on said first linear track so as to move lineally along said first linear track;

a first rotational joint member having a first axis of rotation independent of lineal movement by said first carriage along said first linear track and being adapted to be connected to said first carriage;

a second rotational joint member having a second axis of rotation and being rotatably connected to said first rotational joint member so that said first axis of rotation and said second axis of rotation are collinear and said first and second joint members rotate relative to one another about their axes of rotation;

a third rotational joint member having a third axis of rotation and being connected to said second rotational joint member so that said third axis of rotation intersects a line which is substantially perpendicular to said second axis of rotation and to said third axis of rotation; and

a fourth rotational joint member adapted to be connected to the second part of the computer, said fourth rotational joint member having a fourth axis of rotation and being rotatably connected to said third rotational joint member so that said fourth axis of rotation and said third axis of rotation are collinear, and said fourth and third joint members rotate relative to one another about their axes of rotation, and that the second part of the computer and the first part of the computer can be rotated with respect to one another about two distinct axes.

2. The interconnection assembly of claim 1, further comprising:

a fifth rotational joint member having a fifth axis of rotation and being connected to said second rotational joint member so that said fifth axis of rotation intersects said second axis of rotation; and

a sixth rotational joint member connected to said third rotational joint member, having a sixth axis of rotation and being rotatably connected to said fifth rotational joint member so that said sixth axis of rotation and said fifth axis of rotation are collinear and said sixth and fifth joint members rotate relative to one another about their axes of rotation, and that the second part of the computer and the first part of the computer can be rotated with respect to one another about a third distinct axis.

3. The interconnection assembly of claim 1, further comprising:

a second linear track adapted to be connected to a second part of the computer; and

a second carriage movably mounted on said second linear track so as to move lineally along said second linear track, said second carriage being connected to said fourth rotational joint member, so that the second part of the computer can be moved lineally with respect to the first part of the computer on said first linear track and the first part of the computer can be moved lineally with respect to the second part of the computer on said second linear track.

4. The interconnection assembly of claim 1, wherein said interconnection assembly includes a self-releasing connector for releasably connecting the interconnection assembly to one of the first or second parts of the computer.

5. The interconnecting assembly of claim 1, wherein said first rotational joint member includes a plurality of first electrical contacts and said second rotational joint member includes a plurality of second electrical contacts corresponding to and in contact with respective first electrical contacts regardless of the relative rotational position of said first rotational joint member and said second rotational joint member, said first plurality of electrical contacts being disposed around the periphery of said first rotational joint member and said second plurality of electrical contacts being disposed on the inside of a cylindrical sleeve extending from said second rotational joint member over said first rotational joint member, so that the first part of the computer and the second part of the computer can be rotated with respect to one another while maintaining electrical communication therebetween through said interconnection assembly.

6. An interconnection assembly for a portable electronic computer, the computer having a first part and a second part, comprising:

a first linear track adapted to be connected to the first part of the computer;

a first carriage movably mounted on said first linear track so as to move lineally along said first linear track;

a first rotational joint member having a first axis of rotation and being adapted to be connected to said first carriage;

a second rotational joint member having a second axis of rotation and being rotatably connected to said first rotational joint member so that said first axis of rotation and said second axis of rotation are collinear and said first and second joint members rotate relative to one another about their axes of rotation;

a third rotational joint member having a third axis of rotation and being connected to said second rotational